IN THE CLAIMS:

Please cancel claims 1, 3 - 11, 13 - 18, and 21, 24, 27, and 28. Please add claims 29 - 52.

~~Claims 1 - 28 (cancelled).~~

29. (new) A method of calibrating a computer-vision system to track a selected object through a series of frames of data, comprising:

displaying an image frame from an image input device, said image frame including a calibration rectangle;

converting the image frame from red-green-blue pixel information to a hue saturation value (HSV) array of pixels;

thresholding the HSV array of pixels to create a thresholded HSV array of pixels;

establishing an initial test window in the thresholded HSV array of pixels to create an initial test HSV array of pixels;

determining a mean saturation of the initial test HSV array of pixels;

determining if the mean saturation of the initial test HSV array of pixels falls within a first predetermined range;

determining if a standard deviation of saturation of the initial test HSV array of pixels is less than a first predetermined amount if the mean saturation of initial test HSV array of pixels falls within the first predetermined range;

determining a mean hue of the initial test HSV array of pixels if the standard deviation of the saturation of the initial test HSV array of pixels is less than the first predetermined amount, and

determining a standard deviation of hue of the initial test HSV array of pixels if

the mean hue of the initial HSV array of pixels falls within a second predetermined range.

30. (new) The method of claim 29, further including utilizing a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if the mean saturation of the initial HSV array of pixels falls within the first predetermined range.

31. (new) The method of claim 29, further including utilizing a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if the standard deviation of the saturation of the initial test HSV array of pixels is less than the first predetermined amount.

32. (new) The method of claim 29, further including utilizing a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if the standard if the mean hue of the initial test HSV array of pixels falls within the second predetermined range.

33. (new) The method of claim 29, further including utilizing a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if the standard deviation of the initial test HSV array of pixels is less than a second predetermined amount.

34. (new) The method of claim 29, further including determining if a sum of the standard deviation of hue and the standard deviation of saturation of the initial test HSV array of pixels is less than a sum of a standard deviation of hue and a standard deviation of saturation for current pixel data stored in a memory.

35. (new) The method of claim 34, further including storing the initial test HSV

array of pixels as the current pixel data if the standard deviation of hue and the standard deviation of saturation for the initial test HSV array of pixels is less than the sum of the standard deviation of hue and the standard deviation of saturation for the current pixel data stored in the memory.

36. (new) The method of claim 35, further including:

utilizing a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if a last location for the test window has not been reached,

determining a mean saturation of the next test HSV array of pixels;

determining if the mean saturation of the next test HSV array of pixels falls within the first predetermined range;

determining if a standard deviation of the next test HSV array of pixels is less than a first predetermined amount if the mean saturation of the next test HSV array of pixels falls within the first predetermined range,

determining a mean hue of the next test HSV array of pixels if the standard deviation of the next test HSV array of pixels is less than the first predetermined amount,

determining a standard deviation of hue of the next test HSV array of pixels if the mean hue of the next test HSV array of pixels falls within a second predetermined range,

determining if a sum of the standard deviation of the hue and the standard deviation of saturation of the next test HSV array of pixels is less than the sum of the standard deviation of hue and the standard deviation of saturation for the current pixel data stored in the memory, and

storing the next test HSV array of pixels as the current pixel data if the standard deviation of hue and the standard deviation of saturation for the next test HSV array of pixels is less than the sum of the standard deviation of hue and the standard deviation of saturation for the current pixel data stored in memory.

37. (new) The method of claim 36, further including repeating the steps of claim 36 until the last location of the test window has been reached.

38. (new) The method of claim 37, further including combining the current stored pixel data with previously stored pixel data of other frames of data to create a combined pixel data.

39. (new) The method of claim 38, further including determining if a standard deviation of hue for the combined pixel data is less than a third predetermined amount.

40. (new) The method of claim 39, further including determining if a standard deviation of saturation of the combined pixel data is less than a fourth predetermined amount, if the combined standard deviation of the hue for the combined pixel data is less than a the third predetermined amount, and

creating a pixel classification map if the standard deviation of saturation of the combined pixel data Is less than the fourth predetermined amount.

41. (new) A machine-readable medium having recorded thereon instructions, such that when said instructions are executed, said instructions cause a computer to:

display an image frame from an image input device, said image frame including a calibration rectangle;

convert the image frame from red-green-blue pixel information to a hue saturation value (HSV) array of pixels;

threshold the HSV array of pixels to create a thresholded HSV array of pixels;

establish an initial test window in the thresholded HSV array of pixels to create an initial test HSV array of pixels;

determine a mean saturation of the initial test HSV array of pixels;

determine if the mean saturation of the initial test HSV array of pixels falls within a first predetermined range;

determine if a standard deviation of saturation of the initial test HSV array of pixels is less than a first predetermined amount if the mean saturation of initial test HSV array of pixels falls within the first predetermined range;

determine a mean hue of the initial test HSV array of pixels if the standard deviation of the saturation of the initial test HSV array of pixels is less than the first predetermined amount, and

determine a standard deviation of hue of the initial test HSV array of pixels if the mean hue of the initial HSV array of pixels falls within a second predetermined range.

42. (new) The method of claim 41, including instructions, which when executed, cause the computer to utilize a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if the mean saturation of the initial HSV array of pixels falls within the first predetermined range.

43. (new) The method of claim 41, including instructions, which when executed, cause the computer to utilize a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if the standard deviation of the saturation of the initial test HSV array of pixels is less than the first predetermined amount.

44. (new) The method of claim 41, including instructions, which when executed,

cause the computer to utilize a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if the standard if the mean hue of the initial test HSV array of pixels falls within the second predetermined range.

45. (new) The method of claim 41, including instructions, which when executed, cause the computer to utilize a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if the standard deviation of the initial test HSV array of pixels is less than a second predetermined amount.

46. (new) The method of claim 41, including instructions, which when executed, cause the computer to determine if a sum of the standard deviation of hue and the standard deviation of saturation of the initial test HSV array of pixels is less than a sum of a standard deviation of hue and a standard deviation of saturation for current pixel data stored in a memory.

47. (new) The method of claim 46, including instructions, which when executed, cause the computer to store the initial test HSV array of pixels as the current pixel data if the standard deviation of hue and the standard deviation of saturation for the initial test HSV array of pixels is less than the sum of the standard deviation of hue and the standard deviation of saturation for the current pixel data stored in the memory.

48. (new) The method of claim 47, including instructions, which when executed, cause the computer to:

utilize a next test window in the thresholded HSV array of pixels to create a next test HSV array of pixels if a last location for the test window has not been reached,

determine a mean saturation of the next test HSV array of pixels;

determine if the mean saturation of the next test HSV array of pixels falls within

the first predetermined range;

determine if a standard deviation of the next test HSV array of pixels is less than a first predetermined amount if the mean saturation of the next test HSV array of pixels falls within the first predetermined range,

determine a mean hue of the next test HSV array of pixels if the standard deviation of the next test HSV array of pixels is less than the first predetermined amount,

determine a standard deviation of hue of the next test HSV array of pixels if the mean hue of the next test HSV array of pixels falls within a second predetermined range,

determine if a sum of the standard deviation of the hue and the standard deviation of saturation of the next test HSV array of pixels is less than the sum of the standard deviation of hue and the standard deviation of saturation for the current pixel data stored in the memory, and

store the next test HSV array of pixels as the current pixel data if the standard deviation of hue and the standard deviation of saturation for the next test HSV array of pixels is less than the sum of the standard deviation of hue and the standard deviation of saturation for the current pixel data stored in memory.

49. (new) The method of claim 48, further including instructions, which when executed, cause the computer to repeat the steps of claim 36 until the last location of the test window has been reached.

50. (new) The method of claim 49, further including instructions, which when executed, cause the computer to combine the current stored pixel data with previously

stored pixel data of other frames of data to create a combined pixel data.

51. (new) The method of claim 50, including instructions, which when executed, cause the computer to determine if a standard deviation of hue for the combined pixel data is less than a third predetermined amount.

52. (new) The method of claim 51, including instructions, which when executed, cause the computer to determine if a standard deviation of saturation of the combined pixel data is less than a fourth predetermined amount, if the combined standard deviation of the hue for the combined pixel data is less than a the third predetermined amount, and

create a pixel classification map if the standard deviation of saturation of the combined pixel data Is less than the fourth predetermined amount.